

What is claimed is:

SUB A1 1. A digital data processing system for determining clinical outcomes of medical data, the digital data processing system comprising:

5 an input mechanism receiving sets of medical information, each set having characteristics relating to a specific medical study and the characteristics of each set having an associated value;

a storage mechanism coupled to the input mechanism, the storage mechanism receiving and maintaining the plurality of sets of medical information;

10 a processor coupled to the storage mechanism, the processor selecting a first characteristic common to at least two sets of medical information, and processing all values of the first characteristic according to a clinical algorithm to determine a clinical outcome of the sets of medical information for the specific medical study based upon the selected first characteristic; and

15 an output mechanism coupled to the processor to receive the clinical outcome of the sets of medical information and to output the clinical outcome to a user of the digital data processing system such that the user may depend upon the clinical outcome during the course of the medical study.

20 2. The digital data processing system of claim 1 wherein:

the sets of medical information containing characteristics related to the specific medical study include data related to at least one of a patient, a drug, an ailment, a doctor and a treatment technique; and

25 wherein the clinical outcome determined based upon the selected first characteristic indicates a statistical result derived from the clinical algorithm for at least one of a patient, a drug, an ailment and a doctor in relation to another of at least one of a patient, a drug, an ailment and a doctor.

3. The digital data processing system of claim 2 wherein:

30 the processor selects a second characteristic common to the sets of medical information and processes, using the clinical algorithm, the second characteristic in combination with the first

characteristic to determine a cross-correlation between the first characteristic and the second characteristic which is included in the clinical outcome for the sets of medical information related to the specific medical study.

- 5 4. The digital data processing system of claim 2 wherein the first characteristic is an identity of a doctor and wherein the clinical outcome provides an indication of a performance of the doctor for at least one of a specific drug, a specific patient, and a specific ailment in comparison to other doctors.

SUB 127 5. The digital data processing system of claim 3 wherein the first characteristic is an identity of at least one drug and wherein the second characteristic is an identity of at least one other drug, and wherein the clinical outcome provides an indication of a performance of the at least one drug for treating at least one patient in comparison to the at least one other drug.

15 6. The digital data processing system of claim 3 wherein the first characteristic is an identity at least one first doctor and wherein the second characteristic is an identity of at least one second doctor, and wherein the clinical outcome provides an indication of a performance of the at least one first doctor in comparison to the at least one second doctor as related to at least one of:

- 20 i) treatment of at least one patient;
ii) treatment of at least one ailment;
iii) use of at least one drug; and
iv) the success of at least one surgical technique.

25 7. The digital data processing system of claim 1 wherein the processor instructs the input mechanism to receive specific sets of medical information based upon an identity of a user of the digital data processing system and wherein the clinical algorithm for which all values of the first characteristic are processed is selected based upon the identity of the user of the digital data processing system.

30 8. The digital data processing system of claim 1 wherein:

the input mechanism is coupled to a computer network including attached geographically diverse patient and doctor computer systems, and wherein the user of the digital data processing system is a patient who enters at least one of the sets of medical information as input from a patient computer system which is remotely located from the digital data processing system; and

5 wherein the output mechanism provides the clinical outcome to the patient over the network immediately after processing the data, thereby providing a clinical outcome offering immediate feedback in response to entering patient data that takes into account the most up-to-date sets of medical information.

10 9. The digital data processing system of claim 1 wherein the processor analyzes the clinical outcome for specific triggering events and notifies at least one of a doctor, an allied medical professional and a patient upon detection of a specific triggering event that is determined based on the analysis of the clinical outcome.

15 10. A method for implementing medical studies, the method comprising the steps of:
selecting a medical study;
entering medical data related to a patient associated with the medical study;
immediately processing the medical data entered in combination with other data
associated with the medical study using a clinical algorithm specifically designed for the medical
20 study to produce a clinical outcome of the medical study which takes into account the medical data entered that was related to the patient; and

immediately outputting the clinical outcome data once processed to provide an indication as to how the medical data that was entered for the patient effects, and is related to, the outcome of the medical study.

25 11. The method of claim 10 wherein the step of immediately outputting the clinical outcome data allows the clinical outcome data to be used to effect the present treatment of the patient based upon the medical data entered. *TREATMENT BEING MADE OR NOT?*

30 12. The method of claim 10 wherein the step of selecting a medical study includes the steps of:

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obtaining an identification of an individual;
presenting to the individual a list of medical studies for which that individual is
associated, thereby focusing attention of the individual on particular medical studies;
allowing ^{no conf} the user to select one of the medical studies for which that individual is
5 associated; and

OPTIONAL if the identification of the individual indicates the individual is a doctor, presenting to the
doctor a list of patients associated with the medical study and allowing the doctor to select a
current patient associated with the medical study and enter a new patient to be associated with
the study.

10 13. The method of claim 10 wherein the step of immediately processing the medical data
entered using a clinical algorithm executes the clinical algorithm to produce at least one of:

- i) a comparison of doctors for treatment of an ailment;
- ii) a comparison of a drug for treatment of an ailment;
- 15 iii) a comparison of a physician group for treatment of an ailment; and
- iv) a comparison of a surgical technique for treatment of an ailment.

20 14. The method of claim 10 wherein the step of entering medical data further includes the steps
of:

presenting a first question related to the selected medical study to an individual;
retrieving an answer to the question;
presenting a second question related to the selected medical study to the individual,
wherein the second question presented is determined by the answer retrieved in response to the
first question; and
25 repeating the steps of presenting a first question, retrieving an answer and presenting a
second questions, such that a series of questions are presented to the individual which are
governed by the answers received in response to former questions.

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30 15. The method of claim 10 wherein the step of immediately processing the medical data using a
clinical algorithm further includes the steps of:

executing the clinical algorithm to determine if the medical data entered does not conform, within a predetermined threshold, to a standardized set of medical data associated with the medical study, and if so, processing a trigger event for an individual associated with the medical study.

5 16. The method of claim 15 wherein the trigger event is processed for a doctor ^{physician} and wherein the processor, in response to processing the trigger event, notifies the doctor that a patient has entered medical data that does not conform to the predetermined threshold of the standardized set of medical data associated with the medical study.

10 17. The method of claim 15 wherein the trigger event is processed for a patient and wherein the processor, in response to processing the trigger event, notifies the patient ^{e-mail} that the patient has entered medical data that does not conform to the predetermined threshold of the standardized set of medical data associated with the medical study and that the patient should seek medical treatment.

15 18. The method of claim 15 wherein the trigger event is processed based upon an anticipated timing of data entry associated with the medical study.

20 19. A computer system for comparing medical data based upon clinical outcomes, the digital data processing system comprising:

an input mechanism receiving medical information relating to the performance of at least one of a medical treatment, a doctor, and a drug;

25 a storage mechanism coupled to the input mechanism, the storage mechanism receiving and maintaining the medical information;

a processor coupled to the storage mechanism, the processor selecting characteristic of the medical information, and processing all values of the characteristic according to a clinical algorithm to determine a clinical outcome of the medical information based upon the characteristic, the clinical outcome indicating a performance of at least one of the medical

treatment, the doctor, and the drug in comparison to a respective at least one other medical treatment, doctor, and drug; and

an output mechanism coupled to the processor to receive the clinical outcome and to output the clinical outcome in real-time to a user of the digital data processing system to gauge the performance of the at least one of the medical treatment, doctor, and drug.

SUBA57 20. A computer program product having a computer-readable medium including computer program logic encoded thereon for determining clinical outcomes of medical data, such that the computer program logic, when executed on at least one processing unit with the computing device, causes the at least one processing unit to perform the steps of:

10 no receiving sets of medical information, each set having characteristics relating to a specific medical study and the characteristics of each set having an associated value;

maintaining the plurality of sets of medical information;

immediately selecting a first characteristic common to at least two sets of medical information, and immediately processing all values of the first characteristic according to a clinical algorithm to determine a clinical outcome of the sets of medical information for the specific medical study based upon the selected first characteristic; and

immediately outputting the clinical outcome to allow the clinical outcome to be used in a state that accounts for the sets of medical information received.

20 21. A method performing medical diagnosis, the method comprising the steps of:

receiving sets of computerized medical study data;

generating comparison results describing comparisons of the sets of computerized medical study data to produce a medical study profile; and

25 based on the medical study profile, providing an indication of a ranking of a *chart key* characteristic of the medical study profile.

22. The method of claim 21 wherein the step of providing an indication of the ranking provides an indication of a risk assessment of any set of computerized medical study data that contains a

characteristic that does not conform, within a predetermined threshold, to a standardized characteristic in a typical set of computerized medical study data.

SUB A67 23. The method of claim 22 wherein the step of providing an indication signals a trigger event
5 for at least one of the patient, a doctor responsible for treating the patient, and a medical professional associated with the patient, the trigger event notifying the at least one of the patient, the doctor, and the medical professional of the non-conforming characteristic.

10 24. The method of claim 21 wherein the step of providing is performed immediately in response to the steps of receiving and generating, such that the step of providing provides feedback that can be used to effect treatment of a patient associated with at least one of the sets of computerized medical data that was received.

15 25. The method of claim 21 wherein certain of the sets of computerized medical data include a set of answers to a set of questions related to a particular person associated with the medical study; wherein the medical study profile includes a typical set of answers to the set of questions; and wherein the step of generating includes, for each set of computerized medical study data, the step of:

20 comparing the set of answers related to the particular person to the typical set of answers to the set of questions; and

based upon the comparison of the set of answers to the typical set of answers, providing a ranking indicative of a deviation of the set of answers from the typical set of answers.

SUB A77 26. The method of claim 25 wherein the particular person is a doctor and the ranking indicates a
25 relationship of the performance of the doctor in relation to the medical study data.

27. The method of claim 25 wherein the particular person is a patient and the ranking indicates a level of treatment provided to the patient relation to the medical study data.

receiving sets of medical information, each set having characteristics relating to a specific medical study and the characteristics of each set having an associated value;

Doctor

~~immediately outputting the clinical outcome to allow the clinical outcome to be used during the course of the study.~~

the sets of medical information containing characteristics related to the specific medical study include data related to at least one of a patient, a drug, an ailment, a doctor and a treatment technique; and

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selecting a second characteristic common to the sets of medical information and processing, using the clinical algorithm, the second characteristic in combination with the first characteristic to determine a cross-correlation between the first characteristic and the second characteristic which is included in the clinical outcome for the sets of medical information related to the specific medical study.

31. The method of claim 29 wherein the first characteristic is an identity of a doctor and wherein the clinical outcome provides an indication of a performance of the doctor for at least one of a specific drug, a specific patient, and a specific ailment in comparison to other doctors.

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32. The method of claim 31 wherein the first characteristic is an identity of at least one drug and wherein the second characteristic is an identity of at least one other drug, and wherein the clinical outcome provides an indication of a performance of the at least one drug for treating at least one patient in comparison to the at least one other drug.

10 33. The method of claim 31 wherein the first characteristic is an identity at least one first doctor and wherein the second characteristic is an identity of at least one second doctor, and wherein the clinical outcome provides an indication of a performance of the at least one first doctor in comparison to the at least one second doctor as related to at least one of:

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i) treatment of at least one patient;
ii) treatment of at least one ailment;
iii) use of at least one drug; and
iv) the success of at least one surgical technique.

20 34. The method of claim 31 wherein content associated with the clinical outcome that is output is governed, in part, by an identity of a particular person who requests the clinical outcome.
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